



Interactive Learning Media Assisted by Adobe Flash to Improve Students' Motivation and Story-reading Skills at the Third Grade of Elementary School

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ARTICLE INFO

Article history:

Received August 30, 2023

Accepted December 10, 2023

Available online February 25, 2024

Kata Kunci:

Media Pembelajaran Interaktif, Adobe Flash, Motivasi Belajar, Keterampilan Membaca Cerita

Keywords:

Interactive Learning Media, Adobe Flash, Learning Motivation, Story Reading



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ABSTRAK

Belum adanya media pembelajaran yang sesuai dengan tujuan pembelajaran keterampilan membaca merupakan permasalahan yang terdapat di sekolah dasar. Berlandaskan permasalahan tersebut, mengaktakan motivasi dan keterampilan membaca cerita peserta didik rendah. Penelitian ini bertujuan untuk menciptakan media pembelajaran interaktif berbantuan Adobe Flash yang valid, layak dan efektif dalam meningkatkan motivasi dan keterampilan membaca cerita siswa kelas III Sekolah Dasar. Metode penelitian menggunakan RnD dengan prosedur pengembangan model ADDIE. Subjek penelitian terdiri dari ahli materi dan media, guru dan siswa kelas III sekolah dasar. Pengumpulan data menggunakan skala, angket dan tes. Teknik analisis data yaitu analisis kuantitatif yang dijabarkan dengan analisis kualitatif. Hasil penelitian yaitu rata-rata hasil validasi oleh ahli media 99,2%, ahli materi 73,75%, respon guru 94,05% dan respon siswa 97,31%. Hasil penelitian dari uji-t independent dan MANOVA menunjukkan ada perbedaan yang signifikan dan berpengaruh terhadap motivasi dan keterampilan membaca cerita antara siswa yang menggunakan dan tidak menggunakan media pembelajaran interaktif berbantuan Adobe Flash. Disimpulkan bahwa terciptanya media pembelajaran interaktif berbantuan Adobe Flash yang valid, praktis dan efektif sehingga dapat meningkatkan motivasi dan keterampilan membaca cerita siswa kelas III Sekolah Dasar.

ABSTRACT

The absence of learning media that is appropriate to the objectives of learning reading skills is a problem that exists in elementary schools. Based on these problems, the motivation and story reading skills of students are low. This research aims to create interactive learning media assisted by Adobe Flash that is valid, feasible, and effective in increasing third-grade elementary school students' motivation and story-reading skills. The research method uses RnD with the ADDIE model development procedure. The research subjects included material and media experts, teachers and third grade elementary school students. Data collection used scales, questionnaires and tests. The data analysis technique is quantitative analysis which is explained by qualitative analysis. The research results were the average validation results by media experts 99.2%, material experts 73.75%, teacher responses 94.05% and student responses 97.31%. The independent t-test and MANOVA research results show significant differences and influence on motivation and story reading skills between students who use and do not use interactive learning media assisted by Adobe Flash. It was concluded that creating interactive learning media assisted by Adobe Flash that was valid, practical and effective could increase the motivation and story reading skills of third grade elementary school students.

1. INTRODUCTION

Learning is a reciprocal interaction between students and teachers and learning resources in a learning environment. Learning includes acquiring knowledge and information, as well as forming attitudes and beliefs in students supported by learning teachers (Djamaluddin & Wardana, 2019; Karakose et al., 2021; Lubis & Gusman, 2022). Learning is a process carried out by providing education and training to students to achieve learning outcomes (Candra Sari et al., 2022; Syaidah & Faizah, 2021). Information technology has rapidly developed in school learning due to changes and shifts in the educational paradigm. The current educational paradigm is based on information and communication technology (ICT) (Hatlevik et al., 2018; Prayogi & Estetika, 2019). Technological developments can support improving the quality of education in one way, namely by solving educational problems (Hobri et al., 2021; Putra et al., 2021). The current educational problem is the unavailability of technology-based learning media, so teachers who teach lessons do not utilize technology. This is supported by previous research findings, which state that no technology-based learning media is available, so teachers do not use technology enough in learning

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activities (Abdullah, 2018; Biassari et al., 2021; Bustanil & Tri Ardianto, 2019). Problems in learning are often found in elementary schools. The results of interviews and observations showed that class III students seemed less enthusiastic about participating in learning. If we look again, student motivation is relatively low, so when the teacher explains the material, many students ignore the material. Students feel bored because learning is monotonous, and they only listen to the teacher explain and use existing thematic books (Fujiastuti et al., 2019; Izzaturahma et al., 2021). There is no use of technology-based learning media in schools, making teachers learn using existing books (Adnyani & Wibawa, 2021; Gultom et al., 2021; Mustaqim & Kurniawan, 2017; Yulian et al., 2022). The rest repeatedly use story books available in the school reading corner.

Some of the difficulties faced by students in Indonesian language content, especially story reading skills, include students needing help to understand linguistic and non-linguistic aspects in reading stories, students need help with motivational encouragement in story reading activities both from providing examples and practice, students need learning media that supports the learning activity of reading stories (Rahmawati et al., 2021; I. F. R. Sari, 2018). This need exists because there are difficulties in learning story-reading skills. So, students need to be directly involved in learning story-reading skills (Permatasari & Kartika Wienanda, 2023; Yulianti et al., 2018).

Reading problems are fundamental to solve because reading is essential in expanding knowledge. Reading can encourage the development of imagination and stimulate children's language development (Citra Apriliana & Putri Berlianti, 2018). Reading is a process by readers where messages are received from writing, either through words or written language (Arifa, 2017; Krissandi et al., 2018; Muhsyanur, 2014; Riyanti, 2021). Reading is essential for students; through reading, students can develop their imagination and stimulate the evolution of their language (Arina et al., 2020; Gultom et al., 2021; Lestari, 2020). Reading can expand vocabulary and improve students' understanding. The primary purpose of reading is to search for and obtain information, including content, to understand the meaning of reading (Krissandi et al., 2018; Riyanti, 2021; Saefuddin et al., 2019). Reading acquisition can be influenced by various factors, including motivation.

The solution to this problem is to support learning media in the content of story reading skills. Previous research findings also reveal that learning media is one crucial component in learning activities to achieve learning goals (Arina et al., 2020; Candra Eka Setiawan et al., 2020). Media is an essential factor in learning activities. Learning media can help educators convey the material to be taught (Demir, 2021; Lestari, 2020; Lubis & Gusman, 2022; Syahbani et al., 2019). In the current situation, learning media is a breakthrough in optimizing classroom learning. The suitable media and assistance of the proper methods will make it easier for students to receive the material provided by the teacher. Learning media must be created according to needs (Sheng Mei & Surat, 2021; Syahbani et al., 2019). These needs are adjusted to the student's situation in the class, the material to be taught, and the existing facilities. One learning media that can attract interest and provide motivation is interactive learning media (Orhan Gökşün & Gürsoy, 2019; Utomo, 2023). The rapid development of technology and science has influenced the world of education, such as learning in schools and has an impact on the content of learning materials and the way the material is delivered in teaching and learning (Ahmadi, 2017; Lestari, 2020; Mustaqim & Kurniawan, 2017; Tafonao, 2018). Educators need learning media to convey material in the learning process. With the help of learning media, learning becomes more lively and enjoyable (Maharani et al., 2023; Wahyuningsih et al., 2022; Yuniar et al., 2020). The interactive learning media that students and teachers need today is technology-based because students are currently in the alpha generation, a generation familiar with technology (Riyanto et al., 2022; N. Sari et al., 2020). The technology-based media developed is interactive learning media assisted by Adobe Flash. Adobe Flash is an easy-to-use and universal application for creating interactive learning materials (Fujiastuti et al., 2019; Septiyani et al., 2023). The advantage of Adobe Flash CS6 is that it offers many functions for combining images, sound and animation simultaneously (Andriyani et al., 2020; Ibda, 2017; Rezeki, 2018; N. Sari et al., 2020). Adobe Flash CS6 is a multimedia platform for creating digital animations, web applications, websites, films and content for mobile phones and other hardware systems. Adobe Flash CS6 contains files created by file extension software, playable through a browser with Flash Player installed (Wahyuningsih et al., 2022; Yuniar et al., 2020). Adobe Flash CS6 media can support learning because this software has different media formats. So students can hear or see and actively participate in learning (Heliawati et al., 2022).

Based on previous research that has applied Adobe Flash-assisted interactive learning media learning proves that Flash-based interactive multimedia learning affects integrative thematic learning. This is proven by the t-test results showing increased learning outcomes between before and after treatment (Dewi, 2022; Wahyuningsih et al., 2022). The results of other research show that the feasibility level of Adobe Flash interactive multimedia learning for pre-reading is very feasible. Students respond very well when learning media use occurs (Gultom et al., 2021). Based on several research results, the interactive

learning media Adobe Flash positively affects learning outcomes and student enthusiasm for learning. In previous research, no research specifically discussed the use of interactive media assisted by Adobe Flash specifically for story-reading skills. Thus, to complement previous research, research was carried out on developing technology-based media in interactive learning media assisted by Adobe Flash.

2. METHOD

The research uses research and development methods. The development model used is the ADDIE model, which consists of Analysis, Design, Development, Implementation, and Evaluation. At each stage, an evaluation will be carried out to determine improvements (Sugiyono, 2017; Tegeh et al., 2014). The research begins with the analysis stage. At the analysis stage, performance analysis and needs analysis are carried out. Performance analysis resulted in problems of motivation and story reading skills in the third grade at the Langkapura District Public Elementary School; needs analysis produced problem-solving solutions in the form of developing interactive media products with the help of Adobe Flash. The next stage is media design. The design results are then evaluated and continued to the development stage. In the development stage, based on the design, the design is created directly using Adobe Flash. Then, it is evaluated or validated by media construction experts and learning material experts. After the product is valid, practicality tests are carried out on teachers and students at the implementation stage, as well as effectiveness tests on students. Practicality testing to find out how effective the product is for users. Effectiveness test to determine the effectiveness of the product on student learning outcomes.

The subjects in this research were material experts and media experts from Yogyakarta State University lecturers, teachers, and 98 class III students at Public Elementary School 1 Langkapura, Public Elementary School 2 Langkapura, and Public Elementary School 3 Langkapura. Material experts adjust the suitability of comic content with story-reading skills material. Media experts adjust the suitability of comics to the principles, characteristics and elements of Adobe Flash interactive media. Teachers and 26 students of Public Elementary School 1 Langkapura tested the practicality of the media. Seventy-two students will test the effectiveness of media on their learning outcomes. Students to test the effectiveness of this media were from the experimental class, namely class III B Public Elementary School 2 Langkapura and III B Public Elementary School 3 Langkapura. In contrast, the control class was III D Public elementary school 1 Langkapura.

Data collection techniques use scales, questionnaires and tests. The research instruments consisted of a product validation scale by material and media experts, teacher and student response questionnaires, reading motivation questionnaires, and performance tests of students' story-reading skills. Data analysis is used to see the suitability of the media using quantitative analysis and explain it with qualitative analysis. The score results on the expert validation scale and teacher and student response questionnaires are calculated as a percentage of the total data processing to get a category from invalid to very valid, as shown in Table 1.

Table 1. Material and Media Validity and Practicality Criteria

No.	Assessment Aspect	Criteria
0.00 %-20.00%	Invalid/Impractical	Should not Used
21.00%-40.00%	Not enough valid/Not enough practical	Should not Used
41.00%-60.00%	Valid Enough /PracticalEnough	Usable After Major Revision
61.00%-80.00%	Valid/Practical	Usable After Major Revision
81.00 %-100.00%	Very Valid/ VeryPractical	Very Good for Used

Table 2. Student Motivation Questionnaire Grid

No.	Aspect	Indicator	Item Number	Number of Items
1.	Intrinsic	Curiosity	1	1
		Reading Engagement	2	1
		Challenge	3	1
2.	Extrinsic	Academic Value	4	1
		Competition	5	1
		Confession	6	1
		Social	7, 8	2
		Free from Boredom	9	1
		Avoidance of reading work	10	1
		Total		

The motivation questionnaire instrument grid consists of intrinsic and extrinsic aspects with of 10 items (Siregar & Narius, 2019). Students will provide a checklist according to their condition on the items with the options provided. The questionnaire grid is presented in Table 2.

Table 3. Grid for Assessment Guidelines for Story Reading Skills Performance Tests

No.	Assessment Aspect	Criteria	Score
1.	Pronunciation	Accuracy in pronunciation when reading stories	1-4
2.	Intonation	Accuracy of intonation in reading stories	1-4
3.	Fluency	Fluency in reading stories	1-4
4.	Voice Clarity	Clarity of voice when reading stories	1-4
5.	Read completely	The integrity of the letters in the spoken word	1-4

The instrument grid for assessing story reading skills in Table 3 consists of pronunciation, intonation, fluency, clarity of voice, and complete reading with a value range of 1-4 (Kurnianingsih et al., 2018). Motivation and story-reading skills are assessed at the beginning before the learning treatment (pretest) and at the end of the learning treatment (post-test). Data analysis to see the effectiveness of the media using t-independent and Manova. The t-independent test was used to see differences in the level of motivation and story-reading skills of students who used and did not use interactive learning media assisted by Adobe Flash. Meanwhile, the Manova test was used to see the effect of using Adobe Flash on increasing the motivation and story-reading skills of third-grade elementary school students. The criteria for accepting and rejecting H_0 at the 0.05 significance level are if the significance is > 0.05 , then H_0 is accepted; if the significance is < 0.05 , then H_0 is rejected. This test must go through prerequisite tests in the form of normality and homogeneity tests.

3. RESULT AND DISCUSSION

Result

Validity and Feasibility of Interactive Learning Media Assisted by Adobe Flash

Media feasibility is measured using material and media expert validation and teacher and student response questionnaires. Material experts have validated interactive learning media assisted by Adobe Flash by obtaining results from material accuracy with percentage values, as presented in Table 4.

Table 4. Material Expert Assessment Results

No.	Aspect	Score	Percentage (%)	Category
1	Accuracy of Material	17	70.83	Valid
2	Breadth and Clarity of Material	8	66.67	Valid
3	Suitability of Linguistic Aspects	21	75	Valid
4	Accuracy and Usefulness of Material in the Media	13	81.25	Very Valid
Average value			73.75	Valid

The results of the material expert assessment of these four aspects obtained a percentage value of 73.75% in the valid category. So, the suitability of interactive learning media materials assisted by Adobe Flash is in a good category and suitable for use.

Table 5. Media Expert Assessment Results

No.	Aspect	Score	Percentage (%)	Category
1.	General	15	100	Very Valid
2	Appearance	95	100	Very Valid
3	Programming	14	93.33	Very Valid
Average value			99.2	Very Valid

The results of the media expert assessment of interactive learning media assisted by Adobe Flash in Table 5 are in a good category and very suitable for use. That way, the validation results from material and media experts will get decent results. After getting decent results, practicality tests can be carried out by looking at the responses of teachers and students to the media being developed. The practicality test determines the suitability of the media through student responses and teacher responses to the press. In the practicality test, students and teachers provided input and comments on interactive learning media

assisted by Adobe Flash. The practicality test was conducted on students and teachers of class III C of Public Elementary School 1 Langkapura.

Table 6. Teacher Response and Student Response to the Media

No.	Respondent	Result	Category
1	Teacher	94.05	VeryPractical
2	Student	97.31	VeryPractical

The results of the teacher and student responses, as shown in Table 6 received a very worthy category. So, it can be tested because it reaches the minimum value. The minimum percentage of media that is considered appropriate is 61-80% in the proper category. Based on expert assessments of material, media, and teacher and student responses, the results showed that interactive learning media assisted by Adobe Flash was suitable for use.

Effectiveness of Interactive Learning Media Assisted by Adobe Flash

The effectiveness of the media was carried out in field operational tests. Field functional tests were conducted to determine the effectiveness of interactive learning media assisted by Adobe Flash in increasing students' motivation and story-reading skills. The field operational test was divided into three classes: two experimental and one control classes. Learning was carried out in six meetings by conducting a pretest and post-test. Learning in the experimental class uses interactive learning media assisted by Adobe Flash while learning in the control class uses PPT learning media. The effectiveness test can be seen from the independent t-test and Manova test. An independent t-test was conducted to determine differences in motivation and story-reading skills between students who used and did not use interactive learning media assisted by Adobe Flash.

Table 7. Independent t-Test

Variable		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	T	df	Sig. Two-Sided p
Motivation	Equal variances assumed	1.065	0.306	4.064	70	<0.001
Story Reading Skills	Equal variances assumed	0.083	0.774	7.386	70	<0.001

The independent t-test results of students' learning motivation and story reading skills in Table 7 obtained a sig value < 0.001, meaning the sig value < 0.05, so H_0 was rejected. This can be interpreted as a significant difference in motivation and story-reading skills between students who use and do not use interactive learning media assisted by Adobe Flash.

Table 8. Multivariate Test Results

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	0.329	6.797	4.000	138.000	<0.001
Wilks' Lambda	0.671	7.509	4.000	136.000	<0.001
Hotelling's Trace	0.490	8.213	4.000	134.000	<0.001
Roy's Largest Root	0.490	16.903	2.000	69.000	<0.001

The Manova test determines whether interactive learning media assisted by Adobe Flash can significantly increase third-grade elementary school students' motivation and reading skills. Before looking at the MANOVA results, look at the results of the variance/covariance matrix of the dependent variable. The homogeneity test of the covariance matrix obtains the covariance matrix of the same dependent variable. The significance obtained is <0.001, which means the value is less than 0.05. Thus, it can be concluded that interactive learning media assisted by Adobe Flash affects third-grade elementary school students' motivation and story-reading skills. Based on the results of Manova test in Table 8, which explains the reduction and influence, it can be concluded that interactive learning media assisted by Adobe Flash is effectively used to increase the motivation and story-reading skills of class III elementary school students.

Discussion

The initial stage of media development starts with performance analysis and needs analysis activities. In the performance analysis, it was found that students seemed less enthusiastic about participating in learning. If we look again, student motivation is relatively low, so when the teacher explains the material, many students ignore the material. Students feel bored because learning is monotonous and they only listen to the teacher explaining. At the same time, the results of the needs analysis state that learning media is needed to solve problems found in performance analysis. The learning media developed is interactive learning media assisted by Adobe Flash. Interactive learning media assisted by Adobe Flash facilitates student learning and provides an exciting learning experience for students to stimulate students' learning situations (Candrawaty et al., 2022; Kusumawati et al., 2021; Yuniar et al., 2020). Attractive here means that interactive learning media assisted by Adobe Flash has a beautiful appearance in terms of animation, images, writing, and colors so that learning can foster reading motivation (Adeo & Manane, 2022; Andriyani et al., 2020). Interactive learning media assisted by Adobe Flash increases enthusiasm for learning and motivates students to read (Wahyuningsih et al., 2022). Active learning activities make learning more effective by allowing students to practice directly in reading, question and answer activities, or discussions (Efendi et al., 2020; Lukman et al., 2020). Adobe Flash interactive media utilizes technology in its creation and use (Fujiastuti et al., 2019; Shuman, 2013). Using technology in the form of media can motivate students to learn (Das, 2019; Yulian et al., 2022). The use of media to increase motivation is essential (Demir, 2021). Reason is one of the factors that can encourage students to achieve specific goals (Cahyani & Mustadi, 2021; Syahril et al., 2019). High motivation can also encourage higher learning (Dağgöl, 2020). Teachers must increase students' learning motivation so that learning goals can be achieved better (Abdullah, 2018; Adeo & Manane, 2022; Syahril et al., 2019).

After the analysis stage, we formulated a solution to solve the problem using interactive media assisted by Adobe Flash, which aims to increase students' motivation and story-reading skills. The stage after the needs analysis is designing (Tegeh et al., 2014). Media design must look at aspects that are learning objectives based on student character and environmental conditions (Nurrita, 2018; Saripudin et al., 2018; Tafonao, 2018; Yulianti et al., 2018). The design results are then evaluated and continued to the development stage. During the development stage, researchers did not experience significant obstacles. Suggestions for improvement from experts include improvements in choosing clear images, choosing contrasting colors using the concept of light and dark, choosing the size and font of writing, and choosing appropriate sound for the media (Adnyani & Wibawa, 2021; Fujiastuti et al., 2019; Lestari, 2020; Yulianti et al., 2018). The validation results from material and media experts obtained scores in the valid and very valid categories. From this process, future similar researchers can pay more attention to color brightness because of the characteristics of children who like bright colors (Bustanil & Tri Ardianto, 2019; Izzaturahma et al., 2021; Saefuddin et al., 2019; Saputri & Qohar, 2020). Apart from that, other researchers can add examples of the practice of reading stories in the form of audio with text because, in the media that has been created, there are only three examples in every level. After the development stage, it continues with the implementation stage to see practicality and media effectiveness tests (Izzaturahma et al., 2021; Saputri & Qohar, 2020; Syahril et al., 2019). Practicality tests were carried out on teachers and students. The practicality test results were obtained from the average teacher and student response questionnaire results. Based on the practicality test, the teacher responded 94.05%, and the student responded 97.31%, so the criteria results were efficient. Both teachers and students stated that this media was relatively easy to use, the language was easy to understand, and it was close to the children's world. The effectiveness test results through independent tests and MANOVA obtained significant results, which showed that interactive media assisted by Adobe Flash was effective in increasing motivation and story-reading skills.

Based on the implementation results of practicality tests and effectiveness tests, it is proven that interactive learning media assisted by Adobe Flash is easy to use and can improve learning outcomes to achieve learning objectives (Dewi, 2022; Fujiastuti et al., 2019; Gultom et al., 2021; Heliawati et al., 2022). The success of interactive learning media assisted by Adobe Flash makes students more active, enthusiastic and produces learning outcomes above the minimum limit (Rezeki, 2018; Saripudin et al., 2018; Septiyani et al., 2023). Based on the results of current research, which is supported by previous research, it can be seen that the advantages of interactive learning media assisted by Adobe Flash are as follows: First, it contains interesting material by encouraging users to engage in the desired behavior, thereby increasing student participation, motivation, and achievement (Adnyani & Wibawa, 2021; Saputri & Qohar, 2020). Second, the media has a practice feature to make it easier for students to understand the practice of reading good stories. Third, the media has many choices of stories suitable for students' ages so that students feel interested in using the media.

Apart from the advantages above, the weaknesses of interactive media assisted by Adobe Flash must be considered so that future researchers can anticipate them are: first, the limited use of media, which

can only be operated via computers and laptops. Media cannot be used on mobile phones yet. Second, there is no assessment feature via voice recording. So, when practicing using media, students can only listen to examples of reading stories without being able to assess students' reading results correctly. So teachers must assess by listening directly to students' reading results.

Even though this research was conducted in the third grade of elementary school and was limited to increasing motivation and story-reading skills, it is hoped that it can have implications and be useful in other ways. Future researchers can carry out developments based on the advantages and disadvantages explained because problems with students' motivation and story-reading skills are also found in other schools.

4. CONCLUSION

The interactive learning media assisted by Adobe Flash is valid, practical, and effective. This media is very suitable for class III learning to increase motivation and story-reading skills. Interactive learning media assisted by Adobe Flash can help teachers deliver more innovative material. This media can also make it easier for students to learn because the press is easy to use and has a variety of exciting story choices. Apart from that, there is a practice feature that makes it easier for students to understand the practice of reading stories well and correctly.

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